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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,831	09/29/2003	Robert J. Barsotti	FA0820 US DIV	2539
23906 7590 05/16/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER MULLIS, JEFFREY C	
			ART UNIT 1711	PAPER NUMBER
			MAIL DATE 05/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,831

Applicant(s)

BARSOTTI ET AL.

Examiner

Jeffrey C. Mullis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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No extension of time is due from applicants. The examiner has reviewed applicants communication of 11-13-06. However in response to the present Office action a new Oath or Declaration is still required in that applicants have not complied with 37 CFR 1.42 (erroneously referred to previously by the Office as 37 CFR 1.44) and 37 CFR 1.64 which requires that a deceased inventors' legal representative sign the Oath or Declaration and state the relationship of the person to the inventor, and, upon information and belief, the facts which the inventor is required to state. If the person signing the oath or declaration is the legal representative of a deceased inventor, the oath or declaration shall also state that the person is a legal representative and the citizenship, residence, and mailing address of the legal representative.

Claims 16-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantially" is subjective and relative and therefore unclear.

"(T)he macromonomer" of claim 18 as well as "b" in claim 21 and "a" in claim 22 lack antecedent basis in any preceding claim.

Claims 19 and 20 are unclear in that they do not state what material "therein" pertains to.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Antonelli et al. (US 5,310,807).

Antonelli discloses formation of a dispersion of a star polymer formed by polymerizing a macromer of weight average molecular weight of 4000-20000 containing isocyanate groups to form a star polymer with 10-50% crosslinked core with at least 3 arms (column 2, lines 21-53). As a crosslinked material (such as the core of patentees) is insoluble, it is apparent that the arms of the star polymer must permit the dispersion of the core which are apparently soluble. The macromer is formed by polymerization of acrylates in the presence of cobalt at column 2, lines 53-55 and column 3, lines 2-13.

Claims 16 and 19-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fisher (US 5,231,137).

Patentees disclose a process in which methylmethacrylate and an unsaturated isocyanate is polymerized in the presence of polypropylene to form a graft copolymer (see at least examples 1 and 2). Note column 10 lines 20-50 including the structure, which based on the disclosed values of "K" and "L" indicating the number of grafted monomer units per graft chain would generally have molecular weights falling within the

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metes and bounds of the claims, for instance the maximum value of 100 would result in a chain having a molecular weight of about 10000 and therefore the examples reasonably produce materials having applicants molecular weight in "ii" of claim 16. With re to the limitation "not soluble in the organic liquid carrier", the claims are not limited as to carrier and given the substantially different polarities of polypropylene and its graft chain it would reasonably appear that a solvent existed which dissolved the graft chain but not the polypropylene backbone reading on applicants "core".

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 16 and 19-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Quiring (US 4134935).

Patentees disclose a methylmethacrylate copolymer having grafted thereto a polyester of molecular weight of 2000 and in which the graft product has a 1.7% isocyanate content. Note at least Example 1 and column 4, lines 40-45. With re to applicants solubility characteristics, it is the position of the examiner that these would be inherent given the different polarities of the backbone and graft side chains.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 16, 19-22 and 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kapuscki (US 5021177).

Patentees disclose in at least Example 1 a process in which an EPDM is grafted with IEM and for which a graft chain molecular weight of about 800 can be deduced based on the amount of EPDM starting material, amount of IEM and assumption that grafting takes place at the diene monomer site (a reasonable assumption given that the diene monomer in EPDM materials is present to take advantage of its reactivity and is presumably present in the EPDM of patentees for this reason also). While the molecular weight of 800 would be calculated as number average, polydispersities of free radically produced polymers, while broad are typically far less than 25 which would be required for the graft chain molecular weight to be outside applicants range.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

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The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 16-25 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 7071264. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims overlap.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis
M-F 9-5 pm at telephone number 571 272 1075.

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Jeffrey C. Mullis
Primary Examiner
Art Unit 1711

JCM

5-12-07

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